

Navy Public Works Center  
Detachment Philadelphia  
STANDARD OPERATING PROCEDURE

Portable Welding Machines

PROCEDURE NUMBER 500.09

**DISCLAIMER:** These Standard Operating Procedures (SOP) are for the exclusive use of NAVY PUBLIC WORKS CENTER (PWC) NORFOLK DETACHMENT PHILADELPHIA. They are promulgated as guidance for other NAVFAC COMMANDS. If intended to be used by other Activities, they must be tailored to each Activities particular requirement and must be reviewed/approved by the activities Safety Professionals prior to use.

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*Preparer:* \_\_\_\_\_ *(Date)*

*Approved:* \_\_\_\_\_ *(Date)*

*Safety Professional:* \_\_\_\_\_ *(Date)*

*Department Head:* \_\_\_\_\_ *(Date)*

*Officer in Charge* \_\_\_\_\_ *(Date)*

**Standard Operating Procedure**  
**500. 09**  
**Portable Welding Machines**

This Standard Operating Procedure is to be followed whenever portable welding machines are used.

**Daily Inspection**

1. Personnel will conduct a daily inspection of the equipment, prior to use, in compliance with the following:

- A. Check engine oil level.
- B. Check engine coolant level.
- C. Check fuel level.

2. Inspect the trailer components.

- A. Inspect lights for proper operation and for obvious defects. Ensure lights are connected to towing vehicle.
- B. Check tires for inflation and obvious defects. Ensure lights are connected to the towing vehicle.
- C. Check trailer hitch, safety chains, and tongue jack for proper operation.

3. Inspect welding leads for cuts, bare wires, and deterioration of connections. Ensure welding leads are connected to proper pole ( +, - ). Welding leads with splices within ten feet of the holder shall not be used.

4. Ensure the fire extinguisher is fully charged and in good operating condition. The fire inspector will inspect the extinguisher prior to issuing hot work permits.

5. Perform a visual check of acetylene hoses, valves, and fittings for leaks. Hoses showing indication of leaks, burns, deterioration, or other defects rendering them unsafe for use, shall be repaired or replaced. Hoses wrapped with tape to prevent tangling shall have no more than four inches of tape per 12 inches of hose.

**NOTE: A soap leak detection check shall be conducted at least once every 30 days.**

6. Before operating, all connections to the welding machine shall be checked for:

- A. Proper grounding .
- B. Proper operation of switches.
- C. Manufacturer=s instructions available for machine.
- D. Electrode holders properly attached.

7. Ensure regulators are not attached to oxygen and acetylene cylinders until ready to use.

**DO NOT** leave attached during transport. Inspect the regulator union nuts and connections before use for faulty seats which may cause leakage of gas.

8. Ensure oxygen and acetylene cylinders are securely clamped in the cylinder storage rack.

**Periodic Inspections** shall be conducted by a qualified maintenance person and a certification record maintained.

### **General Requirements**

1. Never coil or loop welding electrodes around your body.

2. Manuel and automatic arc welding and cutting shall not exceed 100 volts.

3. Machines which have become wet shall be thoroughly dried and tested before being used.

4. Fire resistant welding curtains shall be set up around welding areas.

A. In such a manner that operators of nearby equipment and others who may be in the adjacent areas are protected from the welding flash.

B. In a manner which does not hamper the movement of the welder.

5. Flash back suppressors shall be used when cutting with oxygen and acetylene. The flash back suppressors may be either in line or a component of the torch.

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